

FIG. 1

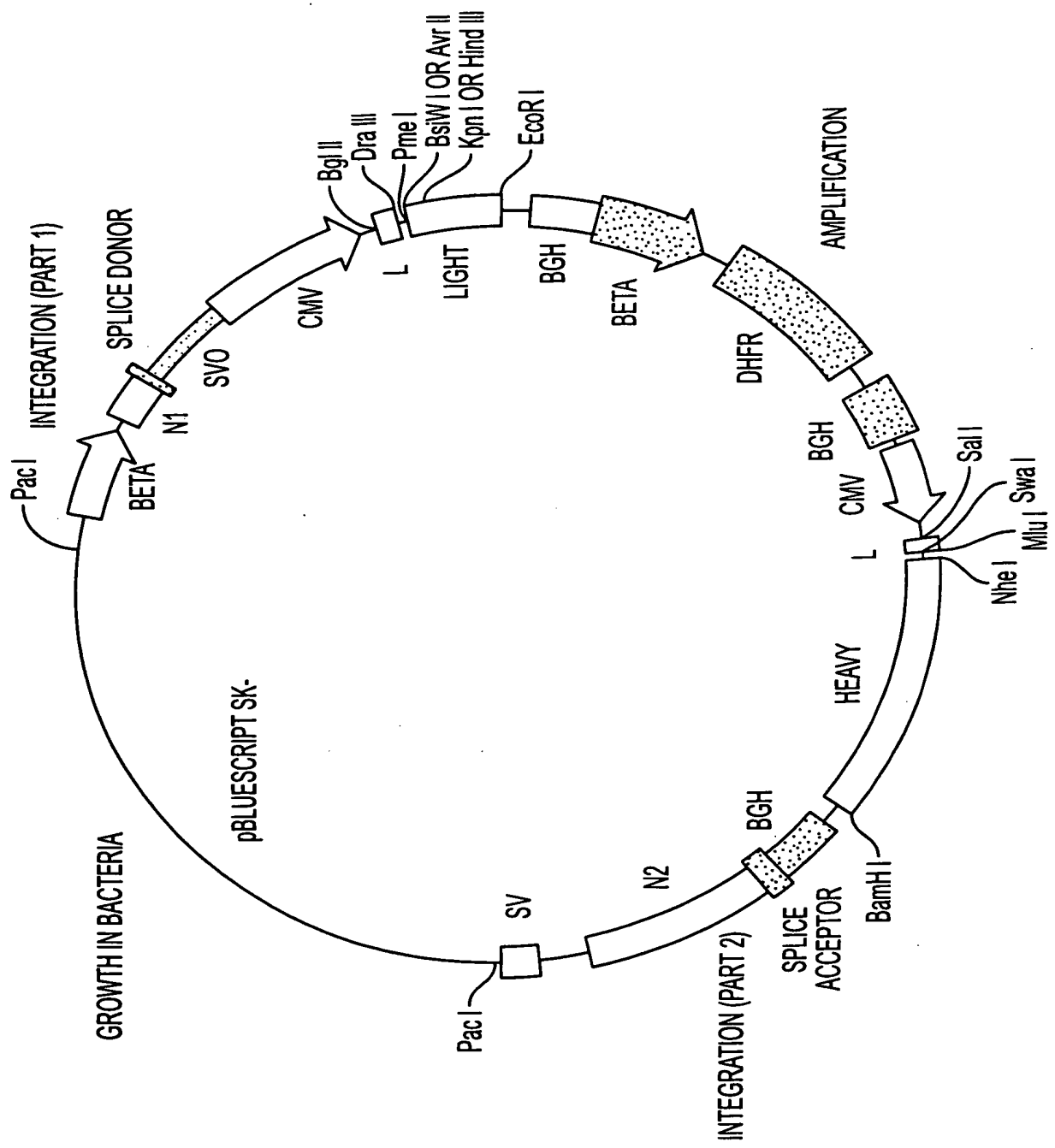


FIG. 2

BY	CLASS	SUBCLASS
TS/MA		

Frame 1 M R V P A O L L G L L L L W L P G A R
 ATG AGG GTC CCC GCT CAG CTC CTG GGG CTC CTG CTC TGG CTC CCA GGT GCA CGA
 9 18 27 36 45 54
 C A Y E L T O P P S V S V S P G O T A R I
 TGT GCC TAT GAA CTG ACT CAG CCA CCC TCG GTG TCA GTG TCC CCA GGA CAG ACG GCC AGG ATC
 63 72 81 90 99 108 117
 T C G G D N S R N E Y V H W Y O O K P A R
 ACC TGT GGG GGA GAC AAC AGT AGA AAT GAA TAT GTG CAC TGG TAC CAG CAG AAG CCA GCG CGG
 126 135 144 153 162 171 180
 A P I L V I Y D D S D R P S G I P E R F S
 GCC CCT ATA CTG GTC ATC TAT GAT GAT AGT GAC CGG CCC TCA GGG ATC CCT GAG CGA TTC TCT
 189 198 207 216 225 234 243
 G S K S G N T A T L T I N G V E A G D E A
 GGC TCC AAA TCA GGG AAC ACC GCC ACC CTG ACC ATC AAC GGG GTC GAG GCC GGG GAT GAG GCT
 252 261 270 279 288 297 306
 D Y Y C O V W D R A S D H P V F G G G T R
 GAC TAT TAC TGT CAG GTG TGG GAC AGG GCT AGT GAT CAT CCG GTC TTC GGA GGA GGG ACC CGG
 315 324 333 342 351 360 369
 V T V L G O P K A A P S V T L F P P S S E
 GTG ACC GTC CTA GGT CAG CCC AAG GCT GCC CCC TCG GTC ACT CTG TTC CCG CCC TCC TCT GAG
 378 387 396 405 414 423 432
 E L O A N K A T L V C L I S D F Y P G A V
 GAG CTT CAA GCC AAC AAG GCC ACA CTG GTG TGT CTC ATA AGT GAC TTC TAC CCG GGA GCC GTG
 441 450 459 468 477 486 495
 T V A W K A D S S P V K A G V E T T T P S
 ACA GTG GCC TGG AAG GCA GAT AGC AGC CCC GTC AAG GCG GGA GTG GAG ACC ACC ACA CCC TCC
 504 513 522 531 540 549 558
 K O S N N K Y A A S S Y L S L T P E O W K
 AAA CAA AGC AAC AAC AAG TAC GCG GCC AGC AGC TAC CTG AGC CTG ACG CCT GAG CAG TGG AAG
 567 576 585 594 603 612 621
 S H R S Y S C O V T H E G S T V E K T V A
 TCC CAC AGA AGC TAC AGC TGC CAG GTC ACG CAT GAA GGG AGC ACC GTG GAG AAG ACA GTG GCC
 630 639 648 657 666 675 684
 P T E C S
 CCT ACA GAA TGT TCA TGA
 693 702

FIG. 3A

Frame 1	M	K	H	L	W	F	F	L	L	L	V	A	A	P	R	W	V	L	S	
	ATG	AAA	CAC	CTG	TGG	TTC	TTC	CTC	CTC	CTG	GTG	GCA	GCT	CCC	AGA	TGG	GTC	CTG	TCC	
			9			18			27			36			45			54		
O	V	K	L	O	Q	W	G	E	G	L	L	O	P	S	E	T	L	S	R	T
CAG	GTG	AAG	CTG	CAG	CAG	TGG	GGC	GAA	GGA	CTT	CTG	CAG	CCT	TCG	GAG	ACC	CTG	TCC	CGC	ACC
	63			72			81			90			99			108			117	
C	V	V	S	G	G	S	I	S	G	Y	Y	Y	W	T	W	I	R	O	T	P
TGC	GTT	GTC	TCT	GGT	GGC	TCC	ATC	AGC	GGT	TAC	TAC	TAC	TGG	ACC	TGG	ATC	CGC	CAG	ACC	CCA
	126			135			144			153			162			171			180	
G	R	G	L	E	W	I	G	H	I	Y	G	N	G	A	T	T	N	Y	N	P
GGG	AGG	GGA	CTG	GAG	TGG	ATT	GGC	CAT	ATT	TAT	GGT	AAT	GGT	GCG	ACC	ACC	AAC	TAC	AAT	CCC
	189			198			207			216			225			234			243	
S	L	K	S	R	V	T	I	S	K	D	T	S	K	N	O	F	F	L	N	L
TCC	CTC	AAG	AGT	CGA	GTC	ACC	ATT	TCA	AAA	GAC	ACG	TCC	AAG	AAC	CAG	TTC	TTC	CTG	AAC	TTG
	252			261			270			279			288			297			306	
N	S	V	T	D	A	D	T	A	V	Y	Y	C	A	R	G	P	R	P	D	C
AAT	TCT	GTG	ACC	GAC	GCG	GAC	ACG	GCC	GTC	TAT	TAC	TGT	GCG	AGA	GGC	CCT	CGC	CCT	GAT	TGC
	315			324			333			342			351			360			369	
T	T	I	C	Y	G	G	W	V	D	V	W	G	P	G	D	L	V	T	V	S
ACA	ACC	ATT	TGT	TAT	GGC	GGC	TGG	GTC	GAT	GTC	TGG	GGC	CCG	GGA	GAC	CTG	GTC	ACC	GTC	TCC
	378			387			396			405			414			423			432	
S	A	S	T	K	G	P	S	V	F	P	L	A	P	S	S	K	S	T	S	G
TCA	GCT	AGC	ACC	AAG	GGC	CCA	TCG	GTC	TTC	CCC	CTG	GCA	CCC	TCC	TCC	AAG	AGC	ACC	TCT	GGG
	441			450			459			468			477			486			495	
G	T	A	A	L	G	C	L	V	K	D	Y	F	P	E	P	V	T	V	S	W
GGC	ACA	GCG	GCC	CTG	GGC	TGC	CTG	GTC	AAG	GAC	TAC	TTC	CCC	GAA	CCG	GTG	ACG	GTG	TCG	TGG
	504			513			522			531			540			549			558	
N	S	G	A	L	T	S	G	V	H	T	F	P	A	V	L	O	S	S	G	L
AAC	TCA	GGC	GCC	CTG	ACC	AGC	GGC	GTG	CAC	ACC	TTC	CCG	GCT	GTC	CTA	CAG	TCC	TCA	GGA	CTC
	567			576			585			594			603			612			621	
Y	S	L	S	S	V	V	T	V	P	S	S	S	L	G	T	O	T	Y	I	C
TAC	TCC	CTC	AGC	AGC	GTG	GTG	ACC	GTG	CCC	TCC	AGC	AGC	TTG	GGC	ACC	CAG	ACC	TAC	ATC	TGC
	630			639			648			657			666			675			684	
N	V	N	H	K	P	S	N	T	K	V	D	K	K	A	E	P	K	S	C	D
AAC	GTG	AAT	CAC	AAG	CCC	AGC	AAC	ACC	AAG	GTG	GAC	AAG	AAA	GCA	GAG	CCC	AAA	TCT	TGT	GAC
	693			702			711			720			729			738			747	
K	T	H	T	C	P	P	C	P	A	P	E	L	L	G	G	P	S	V	F	L
AAA	ACT	CAC	ACA	TGC	CCA	CCG	TGC	CCA	GCA	CCT	GAA	CTC	CTG	GGG	GGA	CCG	TCA	GTC	TTC	CTC
	756			765			774			783			792			801			810	
F	P	P	K	P	K	D	T	L	M	I	S	R	T	P	E	V	T	C	V	V
TTC	CCC	CCA	AAA	CCC	AAG	GAC	ACC	CTC	ATG	ATC	TCC	CGG	ACC	CCT	GAG	GTC	ACA	TGC	GTG	GTG
	819			828			837			846			855			864			873	
V	D	V	S	H	E	D	P	E	V	K	F	N	W	Y	V	D	G	V	E	V
GTG	GAC	GTG	AGC	CAC	GAA	GAC	CCT	GAG	GTC	AAG	TTC	AAC	TGG	TAC	GTG	GAC	GGC	GTG	GAG	GTG
	882			891			900			909			918			927			936	

FIG. 3B

H CAT 945	N AAT 945	A GCC 945	K AAG 954	T ACA 954	K AAG 963	P CCG 963	R CGG 972	E GAG 972	E GAG 981	O CAG 981	Y TAC 990	N AAC 990	S AGC 990	T ACG 990	Y TAC 990	R CGT 990	V GTG 999	V GTC 999	S AGC 999	V GTC 999
L CTC 1008	T ACC 1008	V GTC 1017	L CTG 1017	H CAC 1017	O CAG 1026	D GAC 1026	W TGG 1026	L CTG 1035	N AAT 1035	G GGC 1044	K AAG 1044	E GAG 1053	Y TAC 1053	K AAG 1053	C TGC 1053	K AAG 1062	V GTC 1062	S TCC 1062	N AAC 1062	K AAA 1062
A GCC 1071	L CTC 1071	P CCA 1080	A GCC 1080	P CCC 1080	I ATC 1089	E GAG 1089	K AAA 1089	T ACC 1098	I ATC 1098	S TCC 1107	K AAA 1107	A GCC 1116	K AAA 1116	G GGG 1116	O CAG 1116	P CCC 1125	R CGA 1125	E GAA 1125	P CCA 1125	O CAG 1125
V GTG 1134	Y TAC 1134	T ACC 1143	L CTG 1143	P CCC 1152	P CCA 1152	S TCC 1152	R CGG 1152	D GAT 1161	E GAG 1161	L CTG 1170	T ACC 1170	K AAG 1170	N AAC 1179	O CAG 1179	V GTC 1179	S AGC 1188	L CTG 1188	T ACC 1188	C TGC 1188	L CTG 1188
V GTC 1197	K AAA 1197	G GGC 1206	F TTC 1206	Y TAT 1215	P CCC 1215	S AGC 1215	D GAC 1224	I ATC 1224	A GCC 1233	V GTG 1233	E GAG 1233	W TGG 1242	E GAG 1242	S AGC 1242	N AAT 1251	G GGG 1251	O CAG 1251	P CCG 1251	E GAG 1251	N AAC 1251
N AAC 1260	Y TAC 1260	K AAG 1269	T ACC 1269	T ACG 1278	P CCT 1278	P CCC 1278	V GTG 1287	L CTG 1287	D GAC 1296	S TCC 1296	D GAC 1296	G GGC 1305	S TCC 1305	F TTC 1314	F TTC 1314	L CTC 1314	Y TAC 1314	S AGC 1314	K AAG 1314	L CTC 1314
T ACC 1323	V GTG 1323	D GAC 1332	K AAG 1332	S AGC 1341	R AGG 1341	W TGG 1350	O CAG 1350	O CAG 1359	G GGG 1359	N AAC 1368	V GTC 1368	F TTC 1377	S TCA 1377	C TGC 1377	S TCC 1377	V GTG 1377	M ATG 1377	H CAT 1377	E GAG 1377	A GCT 1377
L CTG 1386	H CAC 1395	N AAC 1395	H CAC 1404	Y TAC 1404	T ACG 1413	O CAG 1413	K AAG 1422	S AGC 1422	L CTC 1431	S TCC 1431	L CTG 1431	S TCT 1431	P CCG 1431	G GGT 1431	K AAA 1431	TGA 1431				

FIG. 3C

Frame 1	M	S	L	P	A	O	L	L	G	L	L	L	L	C	V	P	G	S	S	
	ATG	AGC	CTC	CCT	GCT	CAG	CTC	CTC	GGG	CTG	CTA	TTG	CTC	TGC	GTC	CCC	GGG	TCC	AGT	
			9			18			27			36			45			54		
G	E	V	V	M	T	O	S	P	L	S	L	P	I	T	P	G	E	P	A	S
GGG	GAA	GTT	GTG	ATG	ACT	CAG	TCT	CCA	CTG	TCC	CTT	CCC	ATC	ACA	CCT	GGA	GAG	CCG	GCC	TCC
	63			72			81			90			99			108			117	
I	S	C	R	S	S	O	S	L	K	H	S	N	G	D	T	F	L	S	W	Y
ATC	TCC	TGT	AGG	TCT	AGT	CAA	AGC	CTT	AAA	CAC	AGT	AAT	GGA	GAC	ACC	TTC	CTG	AGT	TGG	TAT
	126			135			144			153			162			171			180	
O	O	K	P	G	O	P	P	R	L	L	I	Y	K	V	S	N	R	D	S	G
CAG	CAG	AAG	CCA	GGC	CAA	CCT	CCA	AGG	CTC	CTG	ATT	TAT	AAG	GTT	TCT	AAC	CGG	GAC	TCT	GGG
	189			198			207			216			225			234			243	
V	P	D	R	F	S	G	S	G	A	G	T	D	F	T	L	K	I	S	A	V
GTC	CCA	GAC	AGA	TTC	AGC	GGC	AGT	GGG	GCA	GGG	ACA	GAT	TTC	ACA	CTG	AAA	ATC	AGC	GCA	GTG
	252			261			270			279			288			297			306	
E	A	E	D	V	G	V	Y	F	C	G	O	G	T	R	T	P	P	T	F	G
GAG	GCT	GAA	GAT	GTT	GGG	GTT	TAT	TTC	TGC	GGG	CAA	GGT	ACA	AGG	ACT	CCT	CCC	ACT	TTC	GGC
	315			324			333			342			351			360			369	
G	G	T	K	V	E	I	K	R	T	V	A	A	P	S	V	F	I	F	P	P
GGA	GGG	ACC	AAG	GTG	GAA	ATC	AAA	CGT	ACG	GTG	GCT	GCA	CCA	TCT	GTC	TTC	ATC	TTC	CCG	CCA
	378			387			396			405			414			423			432	
S	D	E	O	L	K	S	G	T	A	S	V	V	C	L	L	N	N	F	Y	P
TCT	GAT	GAG	CAG	TTG	AAA	TCT	GGA	ACT	GCC	TCT	GTT	GTG	TGC	CTG	CTG	AAT	AAC	TTC	TAT	CCC
	441			450			459			468			477			486			495	
R	E	A	K	V	O	W	K	V	D	N	A	L	O	S	G	N	S	O	E	S
AGA	GAG	GCC	AAA	GTA	CAG	TGG	AAG	GTG	GAT	AAC	GCC	CTC	CAA	TCG	GGT	AAC	TCC	CAG	GAG	AGT
	504			513			522			531			540			549			558	
V	T	E	O	D	S	K	D	S	T	Y	S	L	S	S	T	L	T	L	S	K
GTC	ACA	GAG	CAG	GAC	AGC	AAG	GAC	AGC	ACC	TAC	AGC	CTC	AGC	AGC	ACC	CTG	ACG	CTG	AGC	AAA
	567			576			585			594			603			612			621	
A	D	Y	E	K	H	K	V	Y	A	C	E	V	T	H	O	G	L	S	S	P
GCA	GAC	TAC	GAG	AAA	CAC	AAA	GTC	TAC	GCC	TGC	GAA	GTC	ACC	CAT	CAG	GGC	CTG	AGC	TCG	CCC
	630			639			648			657			666			675			684	
V	T	K	S	F	N	R	G	E	C											
GTC	ACA	AAG	AGC	TTC	AAC	AGG	GGA	GAG	TGT	TGA										
	693			702			711			720										

FIG. 4A

Frame 1	M	G	W	S	L	I	L	L	F	L	V	A	V	A	T	R	V	O	C
	ATG	GGT	TGG	AGC	CTC	ATC	TTG	CTC	TTC	CTT	GTC	GCT	GTT	GCT	ACG	CGT	GTC	CAG	TGT
			9			18			27			36			45			54	
E	V	O	L	V	E	S	G	G	G	L	V	Q	P	G	G	S	L	R	V
GAG	GTG	CAA	CTG	GTG	GAG	TCT	GGG	GGA	GGC	TTG	GTC	CAG	CCT	GGC	GGG	TCC	CTG	AGA	GTC
	63			72			81			90			99			108			117
C	A	V	S	G	F	T	F	S	D	H	Y	M	Y	W	F	R	Q	A	P
TGT	GCA	GTC	TCT	GGA	TTC	ACC	TTC	AGT	GAC	CAC	TAC	ATG	TAT	TGG	TTC	CGC	CAG	GCT	CCA
	126			135			144			153			162			171			180
K	G	P	E	W	V	G	F	I	R	N	K	P	N	G	G	T	T	E	Y
AAG	GGG	CCG	GAA	TGG	GTA	GGT	TTC	ATT	AGA	AAC	AAA	CCG	AAC	GGT	GGG	ACA	ACA	GAA	TAC
	189			198			207			216			225			234			243
A	S	V	K	D	R	F	T	I	S	R	D	D	S	K	S	I	A	Y	L
GCG	TCT	GTG	AAA	GAC	AGA	TTC	ACC	ATC	TCC	AGA	GAT	GAT	TCC	AAA	AGC	ATC	GCC	TAT	CTG
	252			261			270			279			288			297			306
M	S	S	L	K	I	E	D	T	A	V	Y	Y	C	T	T	S	Y	I	S
ATG	AGC	AGC	CTG	AAA	ATC	GAG	GAC	ACG	GCC	GTC	TAT	TAC	TGT	ACT	ACA	TCC	TAC	ATT	TCA
	315			324			333			342			351			360			369
C	R	G	G	V	C	Y	G	G	Y	F	E	F	W	G	Q	G	A	L	V
TGT	CGG	GGT	GGT	GTC	TGC	TAT	GGA	GGT	TAC	TTC	GAA	TTC	TGG	GGC	CAG	GGC	GCC	CTG	GTC
	378			387			396			405			414			423			432
V	S	S	A	S	T	K	G	P	S	V	F	P	L	A	P	S	S	K	S
GTC	TCC	TCA	GCT	AGC	ACC	AAG	GGC	CCA	TCG	GTC	TTC	CCC	CTG	GCA	CCC	TCC	TCC	AAG	AGC
	441			450			459			468			477			486			495
S	G	G	T	A	A	L	G	C	L	V	K	D	Y	F	P	E	P	V	T
TCT	GGG	GGC	ACA	GCG	GCC	CTG	GGC	TGC	CTG	GTC	AAG	GAC	TAC	TTC	CCC	GAA	CCG	GTG	ACG
	504			513			522			531			540			549			558
S	W	N	S	G	A	L	T	S	G	V	H	T	F	P	A	V	L	Q	S
TCG	TGG	AAC	TCA	GGC	GCC	CTG	ACC	AGC	GGC	GTG	CAC	ACC	TTC	CCG	GCT	GTC	CTA	CAG	TCC
	567			576			585			594			603			612			621
G	L	Y	S	L	S	S	V	V	T	V	P	S	S	S	L	G	T	Q	T
GGA	CTC	TAC	TCC	CTC	AGC	AGC	GTG	GTG	ACC	GTG	CCC	TCC	AGC	AGC	TTG	GGC	ACC	CAG	ACC
	630			639			648			657			666			675			684
I	C	N	V	N	H	K	P	S	N	T	K	V	D	K	K	A	E	P	K
ATC	TGC	AAC	GTG	AAT	CAC	AAG	CCC	AGC	AAC	ACC	AAG	GTG	GAC	AAG	AAA	GCA	GAG	CCC	AAA
	693			702			711			720			729			738			747
C	D	K	T	H	T	C	P	P	C	P	A	P	E	L	L	G	G	P	S
TGT	GAC	AAA	ACT	CAC	ACA	TGC	CCA	CCG	TGC	CCA	GCA	CCT	GAA	CTC	CTG	GGG	GGA	CCG	TCA
	756			765			774			783			792			801			810
F	L	F	P	P	K	P	K	D	T	L	M	I	S	R	T	P	E	V	T
TTC	CTC	TTC	CCC	CCA	AAA	CCC	AAG	GAC	ACC	CTC	ATG	ATC	TCC	CGG	ACC	CCT	GAG	GTC	ACA
	819			828			837			846			855			864			873
V	V	V	D	V	S	H	E	D	P	E	V	K	F	N	W	Y	V	D	G
GTG	GTG	GTG	GAC	GTG	AGC	CAC	GAA	GAC	CCT	GAG	GTC	AAG	TTC	AAC	TGG	TAC	GTG	GAC	GGC
	882			891			900			909			918			927			936

FIG. 4B

E V H N A K T K P R E E O Y N S T Y R V V
 GAG GTG CAT AAT GCC AAG ACA AAG CCG CGG GAG GAG CAG TAC AAC AGC ACG TAC CGT GTG GTC
 945 954 963 972 981 990 999
 S V L T V L H Q D W L N G K E Y K C K V S
 AGC GTC CTC ACC GTC CTG CAC CAG GAC TGG CTG AAT GGC AAG GAG TAC AAG TGC AAG GTC TCC
 1008 1017 1026 1035 1044 1053 1062
 N K A L P A P I E K T I S K A K G O P R E
 AAC AAA GCC CTC CCA GCC CCC ATC GAG AAA ACC ATC TCC AAA GCC AAA GGG CAG CCC CGA GAA
 1071 1080 1089 1098 1107 1116 1125
 P O V Y T L P P S R D E L T K N O V S L T
 CCA CAG GTG TAC ACC CTG CCC CCA TCC CGG GAT GAG CTG ACC AAG AAC CAG GTC AGC CTG ACC
 1134 1143 1152 1161 1170 1179 1188
 C L V K G F Y P S D I A V E W E S N G O P
 TGC CTG GTC AAA GGC TTC TAT CCC AGC GAC ATC GCC GTG GAG TGG GAG AGC AAT GGG CAG CCG
 1197 1206 1215 1224 1233 1242 1251
 E N N Y K T T P P V L D S D G S F F L Y S
 GAG AAC AAC TAC AAG ACC ACG CCT CCC GTG CTG GAC TCC GAC GGC TCC TTC TTC CTC TAC AGC
 1260 1269 1278 1287 1296 1305 1314
 K L T V D K S R W O O G N V F S C S V M H
 AAG CTC ACC GTG GAC AAG AGC AGG TGG CAG CAG GGG AAC GTC TTC TCA TGC TCC GTG ATG CAT
 1323 1332 1341 1350 1359 1368 1377
 E A L H N H Y T O K S L S L S P G K
 GAG GCT CTG CAC AAC CAC TAC ACG CAG AAG AGC CTC TCC CTG TCT CCG GGT AAA TGA
 1386 1395 1404 1413 1422 1431

FIG. 4C

Frame 1	M	R	V	P	A	O	L	L	G	L	L	L	L	W	L	P	G	A	R	
	ATG	AGG	GTC	CCC	GCT	CAG	CTC	CTG	GGG	CTC	CTG	CTG	CTC	TGG	CTC	CCA	GGT	GCA	CGA	
			9			18			27			36			45			54		
C	E	S	V	L	T	O	P	P	S	V	S	G	A	P	G	O	K	V	T	I
TGT	GAG	TCT	GTC	CTG	ACA	CAG	CCG	CCC	TCA	GTG	TCT	GGG	GCC	CCA	GGG	CAG	AAG	GTC	ACC	ATC
	63			72		81			90			99			108			117		
S	C	T	G	S	T	S	N	I	G	G	Y	D	L	H	W	Y	O	O	L	P
TCG	TGC	ACT	GGG	AGC	ACC	TCC	AAC	ATT	GGA	GGT	TAT	GAT	CTA	CAT	TGG	TAC	CAG	CAG	CTC	CCA
	126			135			144			153			162			171			180	
G	T	A	P	K	L	L	I	Y	D	I	N	K	R	P	S	G	I	S	D	R
GGA	ACG	GCC	CCC	AAA	CTC	CTC	ATC	TAT	GAC	ATT	AAC	AAG	CGA	CCC	TCA	GGA	ATT	TCT	GAC	CGA
	189			198			207			216			225			234			243	
F	S	G	S	K	S	G	T	A	A	S	L	A	I	T	G	L	O	T	E	D
TTC	TCT	GGC	TCC	AAG	TCT	GGT	ACC	GCG	GCC	TCC	CTG	GCC	ATC	ACT	GGG	CTC	CAG	ACT	GAG	GAT
	252			261			270			279			288			297			306	
E	A	D	Y	Y	C	O	S	Y	D	S	S	L	N	A	O	V	F	G	G	G
GAG	GCT	GAT	TAT	TAC	TGC	CAG	TCC	TAT	GAC	AGC	AGC	CTG	AAT	GCT	CAG	GTA	TTC	GGA	GGA	GGG
	315			324			333			342			351			360			369	
T	R	L	T	V	L	G	O	P	K	A	A	P	S	V	T	L	F	P	P	S
ACC	CGG	CTG	ACC	GTC	CTA	GGT	CAG	CCC	AAG	GCT	GCC	CCC	TCG	GTC	ACT	CTG	TTC	CCG	CCC	TCC
	378			387			396			405			414			423			432	
S	E	E	L	O	A	N	K	A	T	L	V	C	L	I	S	D	F	Y	F	G
TCT	GAG	GAG	CTT	CAA	GCC	AAC	AAG	GCC	ACA	CTG	GTG	TGT	CTC	ATA	AGT	GAC	TTC	TAC	CCG	GGA
	441			450			459			468			477			486			495	
A	V	T	V	A	W	K	A	D	S	S	P	V	K	A	G	V	E	T	T	T
GCC	GTG	ACA	GTG	GCC	TGG	AAG	GCA	GAT	AGC	AGC	CCC	GTC	AAG	GCG	GGA	GTG	GAG	ACC	ACC	ACA
	504			513			522			531			540			549			558	
P	S	K	O	S	N	N	K	Y	A	A	S	S	Y	L	S	L	T	P	E	O
CCC	TCC	AAA	CAA	AGC	AAC	AAC	AAG	TAC	GCG	GCC	AGC	AGC	TAC	CTG	AGC	CTG	ACG	CCT	GAG	CAG
	567			576			585			594			603			612			621	
W	K	S	H	R	S	Y	S	C	O	V	T	H	E	G	S	T	V	E	K	T
TGG	AAG	TCC	CAC	AGA	AGC	TAC	AGC	TGC	CAG	GTC	ACG	CAT	GAA	GGG	AGC	ACC	GTG	GAG	AAG	ACA
	630			639			648			657			666			675			684	
V	A	P	T	E	C	S	.													
GTG	GCC	CCT	ACA	GAA	TGT	TCA	TGA													
	693			702			711													

FIG. 5A

Frame 1	M	K	H	L	W	F	F	L	L	L	V	A	A	P	R	W	V	L	S	
	ATG	AAA	CAC	CTG	TGG	TTC	TTC	CTC	CTC	CTG	GTG	GCA	GCT	CCC	AGA	TGG	GTC	CTG	TCC	
			9			18			27			36			45			54		
O	V	O	L	O	E	S	G	P	G	L	V	K	P	S	E	T	L	S	L	T
CAG	GTG	CAG	CTG	CAG	GAG	TCG	GGC	CCA	GGA	CTG	GTG	AAG	CCT	TCG	GAG	ACC	CTG	TCC	CTC	ACC
	63			72			81			90			99			108			117	
C	A	V	S	G	G	S	I	S	G	G	Y	G	W	G	W	I	R	O	P	P
TGC	GCT	GTC	TCT	GGT	GGC	TCC	ATC	AGC	GGT	GGT	TAT	GGC	TGG	GGC	TGG	ATC	CGC	CAG	CCC	CCA
	126			135			144			153			162			171			180	
G	K	G	L	E	W	I	G	S	F	Y	S	S	S	G	N	T	Y	Y	N	P
GGG	AAG	GGG	CTG	GAG	TGG	ATT	GGG	AGT	TTC	TAT	AGT	AGT	AGT	GGG	AAC	ACC	TAC	TAC	AAC	CCC
	189			198			207			216			225			234			243	
S	L	K	S	O	V	T	I	S	T	D	T	S	K	N	O	F	S	L	K	L
TCC	CTC	AAG	AGT	CAA	GTC	ACC	ATT	TCA	ACA	GAC	ACG	TCC	AAG	AAC	CAG	TTC	TCC	CTG	AAG	CTG
	252			261			270			279			288			297			306	
N	S	M	T	A	A	D	T	A	V	Y	Y	C	V	R	D	R	L	F	S	V
AAC	TCT	ATG	ACC	GCC	GCG	GAC	ACG	GCC	GTG	TAT	TAC	TGT	GTG	AGA	GAT	CGT	CTT	TTT	TCA	GTT
	315			324			333			342			351			360			369	
V	G	M	V	Y	N	N	W	F	D	V	W	G	P	G	V	L	V	T	V	S
GTT	GGA	ATG	GTT	TAC	AAC	AAC	TGG	TTC	GAT	GTC	TGG	GGC	CCG	GGA	GTC	CTG	GTC	ACC	GTC	TCC
	378			387			396			405			414			423			432	
S	A	S	T	K	G	P	S	V	F	P	L	A	P	S	S	K	S	T	S	G
TCA	GCT	AGC	ACC	AAG	GGC	CCA	TCG	GTC	TTC	CCC	CTG	GCA	CCC	TCC	TCC	AAG	AGC	ACC	TCT	GGG
	441			450			459			468			477			486			495	
G	T	A	A	L	G	C	L	V	K	D	Y	F	P	E	P	V	T	V	S	W
GGC	ACA	GCG	GCC	CTG	GGC	TGC	CTG	GTC	AAG	GAC	TAC	TTC	CCC	GAA	CCG	GTG	ACG	GTG	TCG	TGG
	504			513			522			531			540			549			558	
N	S	G	A	L	T	S	G	V	H	T	F	P	A	V	L	O	S	S	G	L
AAC	TCA	GGC	GCC	CTG	ACC	AGC	GGC	GTG	CAC	ACC	TTC	CCG	GCT	GTC	CTA	CAG	TCC	TCA	GGA	CTC
	567			576			585			594			603			612			621	
Y	S	L	S	S	V	V	T	V	P	S	S	S	L	G	T	O	T	Y	I	C
TAC	TCC	CTC	AGC	AGC	GTG	GTG	ACC	GTG	CCC	TCC	AGC	AGC	TTG	GGC	ACC	CAG	ACC	TAC	ATC	TGC
	630			639			648			657			666			675			684	
N	V	N	H	K	P	S	N	T	K	V	D	K	K	A	E	P	K	S	C	D
AAC	GTG	AAT	CAC	AAG	CCC	AGC	AAC	ACC	AAG	GTG	GAC	AAG	AAA	GCA	GAG	CCC	AAA	TCT	TGT	GAC
	693			702			711			720			729			738			747	
K	T	H	T	C	P	P	C	P	A	P	E	L	L	G	G	P	S	V	F	L
AAA	ACT	CAC	ACA	TGC	CCA	CCG	TGC	CCA	GCA	CCT	GAA	CTC	CTG	GGG	GGA	CCG	TCA	GTC	TTC	CTC
	756			765			774			783			792			801			810	
F	P	P	K	P	K	D	T	L	M	I	S	R	T	P	E	V	T	C	V	V
TTC	CCC	CCA	AAA	CCC	AAG	GAC	ACC	CTC	ATG	ATC	TCC	CGG	ACC	CCT	GAG	GTC	ACA	TGC	GTG	GTG
	819			828			837			846			855			864			873	
V	D	V	S	H	E	D	P	E	V	K	F	N	W	Y	V	D	G	V	E	V
GTG	GAC	GTG	AGC	CAC	GAA	GAC	CCT	GAG	GTC	AAG	TTC	AAC	TGG	TAC	GTG	GAC	GGC	GTG	GAG	GTG
	882			891			900			909			918			927			936	

FIG. 5B

H	N	A	K	T	K	P	R	E	E	Q	Y	N	S	T	Y	R	V	V	S	V
CAT	AAT	GCC	AAG	ACA	AAG	CCG	CGG	GAG	GAG	CAG	TAC	AAC	AGC	ACG	TAC	CGT	GTG	GTC	AGC	GTC
	945			954			963			972			981			990			999	
L	T	V	L	H	Q	D	W	L	N	G	K	E	Y	K	C	K	V	S	N	K
CTC	ACC	GTC	CTG	CAC	CAG	GAC	TGG	CTG	AAT	GGC	AAG	GAG	TAC	AAG	TGC	AAG	GTC	TCC	AAC	AAA
	1008			1017			1026			1035			1044			1053			1062	
A	L	P	A	P	I	E	K	T	I	S	K	A	K	G	Q	P	R	E	P	Q
GCC	CTC	CCA	GCC	CCC	ATC	GAG	AAA	ACC	ATC	TCC	AAA	GCC	AAA	GGG	CAG	CCC	CGA	GAA	CCA	CAG
	1071			1080			1089			1098			1107			1116			1125	
V	Y	T	L	P	P	S	R	D	E	L	T	K	N	Q	V	S	L	T	C	L
GTG	TAC	ACC	CTG	CCC	CCA	TCC	CGG	GAT	GAG	CTG	ACC	AAG	AAC	CAG	GTC	AGC	CTG	ACC	TGC	CTG
	1134			1143			1152			1161			1170			1179			1188	
V	K	G	F	Y	P	S	D	I	A	V	E	W	E	S	N	G	Q	P	E	N
GTC	AAA	GGC	TTC	TAT	CCC	AGC	GAC	ATC	GCC	GTG	GAG	TGG	GAG	AGC	AAT	GGG	CAG	CCG	GAG	AAC
	1197			1206			1215			1224			1233			1242			1251	
N	Y	K	T	T	P	P	V	L	D	S	D	G	S	F	F	L	Y	S	K	L
AAC	TAC	AAG	ACC	ACG	CCT	CCC	GTG	CTG	GAC	TCC	GAC	GGC	TCC	TTC	TTC	CTC	TAC	AGC	AAG	CTC
	1260			1269			1278			1287			1296			1305			1314	
T	V	D	K	S	R	W	Q	Q	G	N	V	F	S	C	S	V	M	H	E	A
ACC	GTG	GAC	AAG	AGC	AGG	TGG	CAG	CAG	GGG	AAC	GTC	TTC	TCA	TGC	TCC	GTG	ATG	CAT	GAG	GCT
	1323			1332			1341			1350			1359			1368			1377	
L	H	N	H	Y	T	Q	K	S	L	S	L	S	P	G	K					
CTG	CAC	AAC	CAC	TAC	ACG	CAG	AAG	AGC	CTC	TCC	CTG	TCT	CCG	GGT	AAA	TGA				
	1386			1395			1404			1413			1422			1431				

FIG. 5C

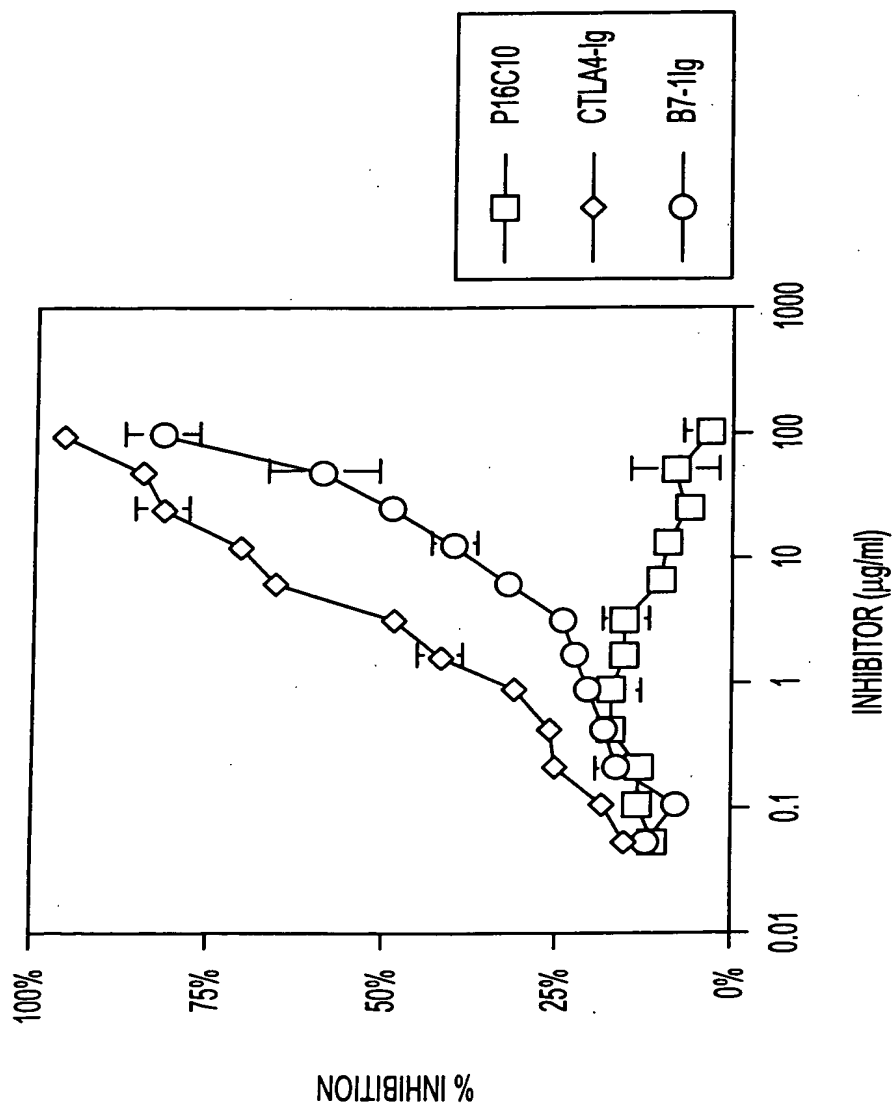


FIG. 6

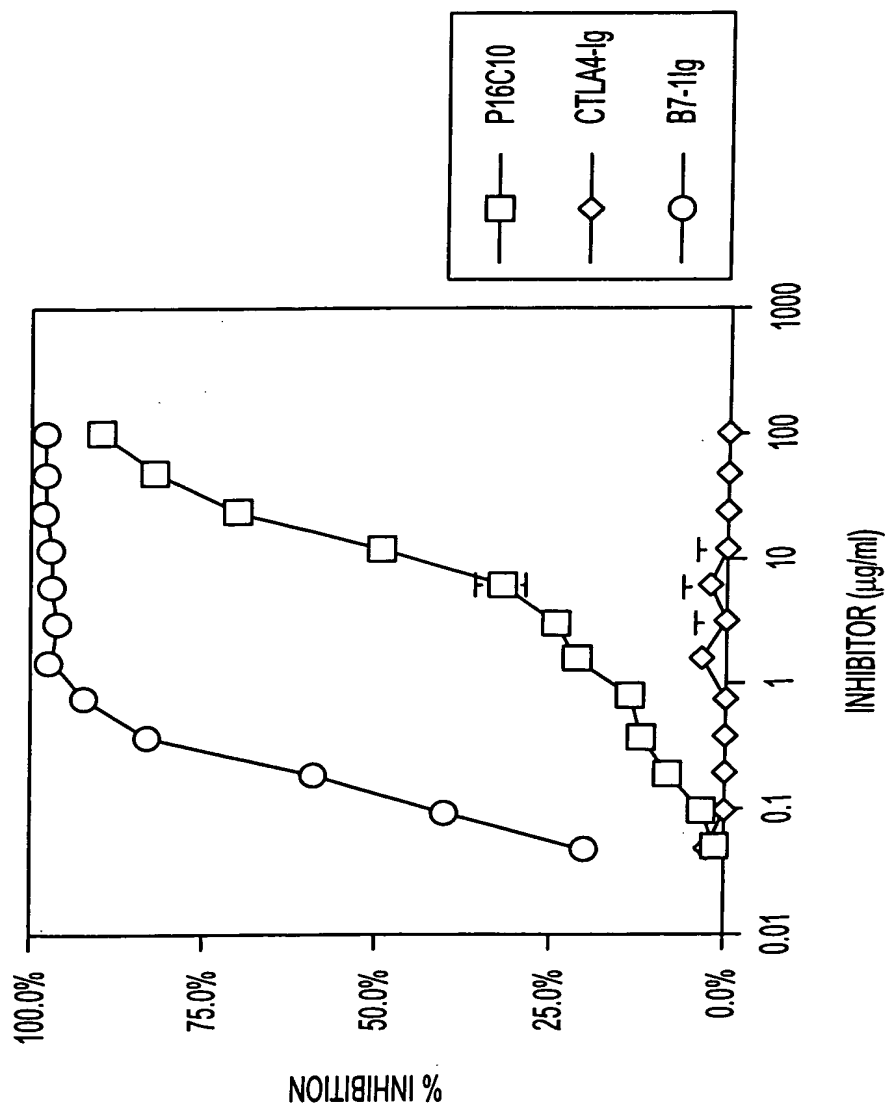


FIG. 7

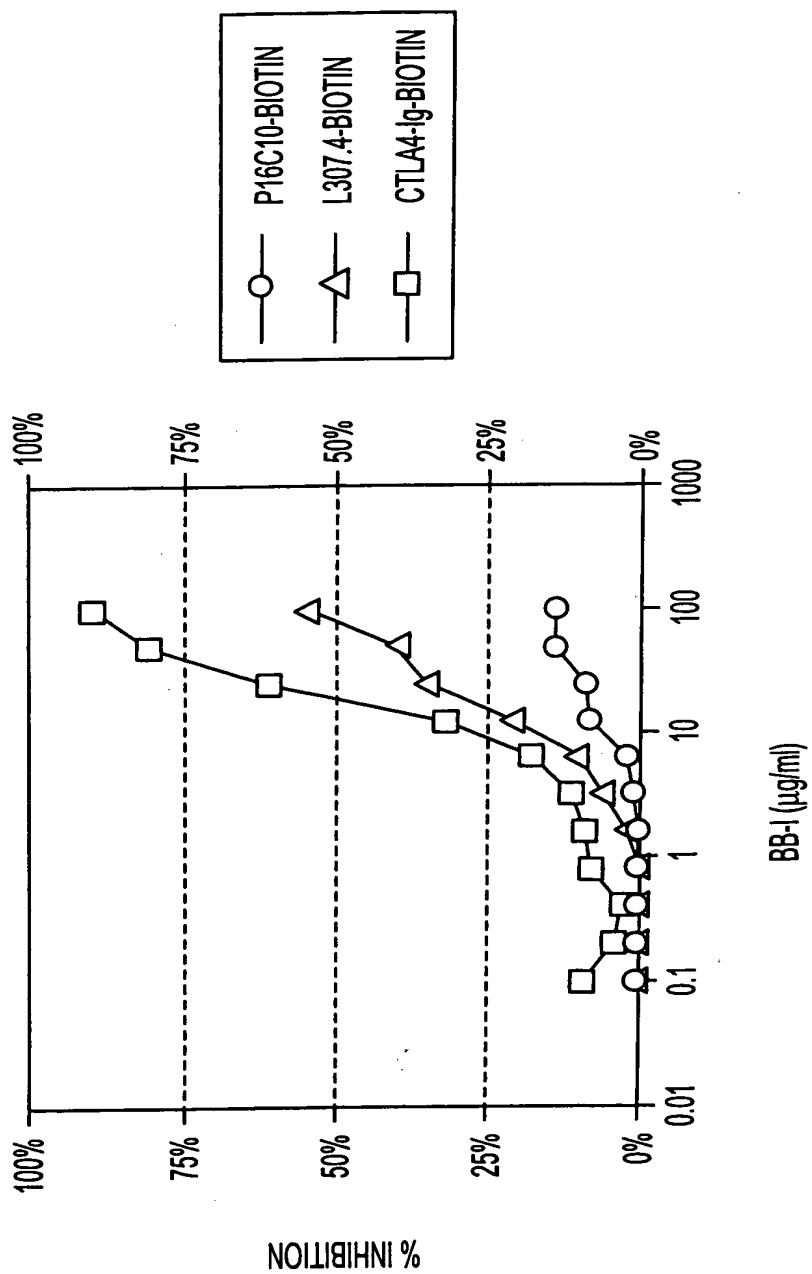


FIG. 8

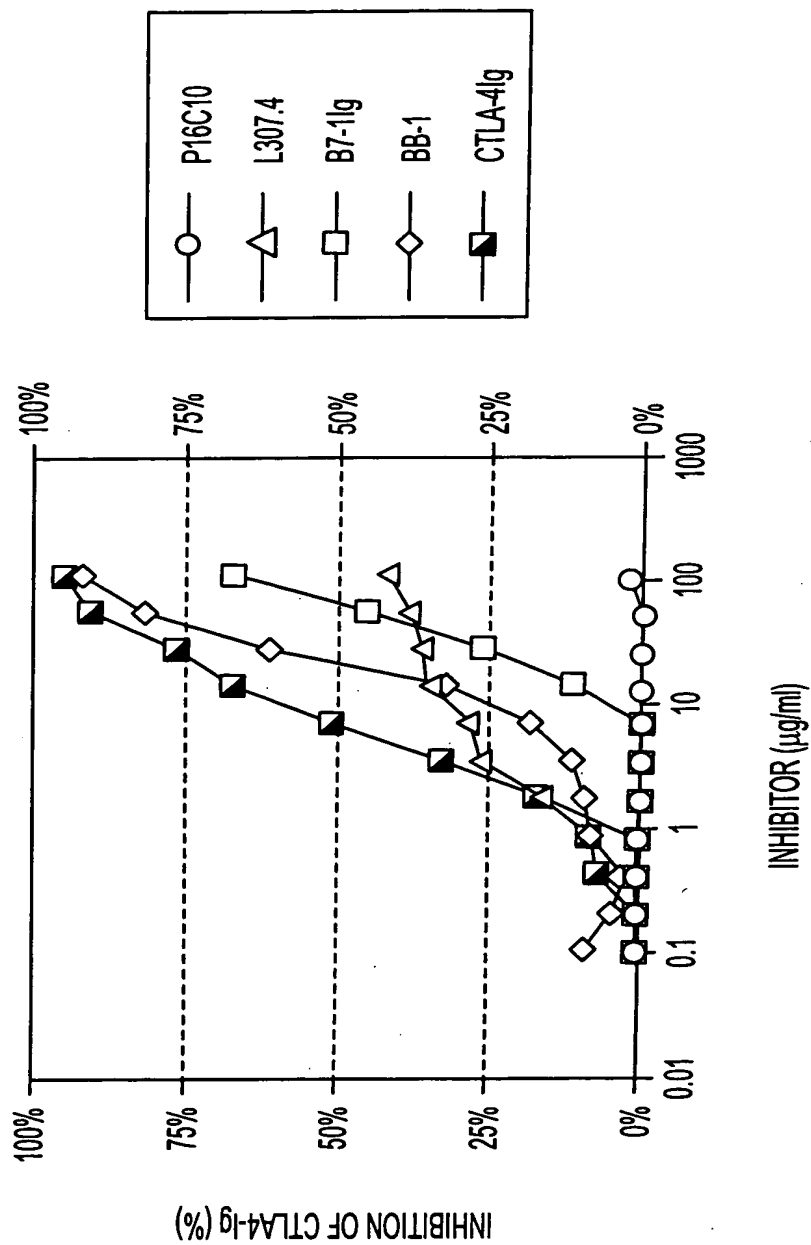


FIG. 9

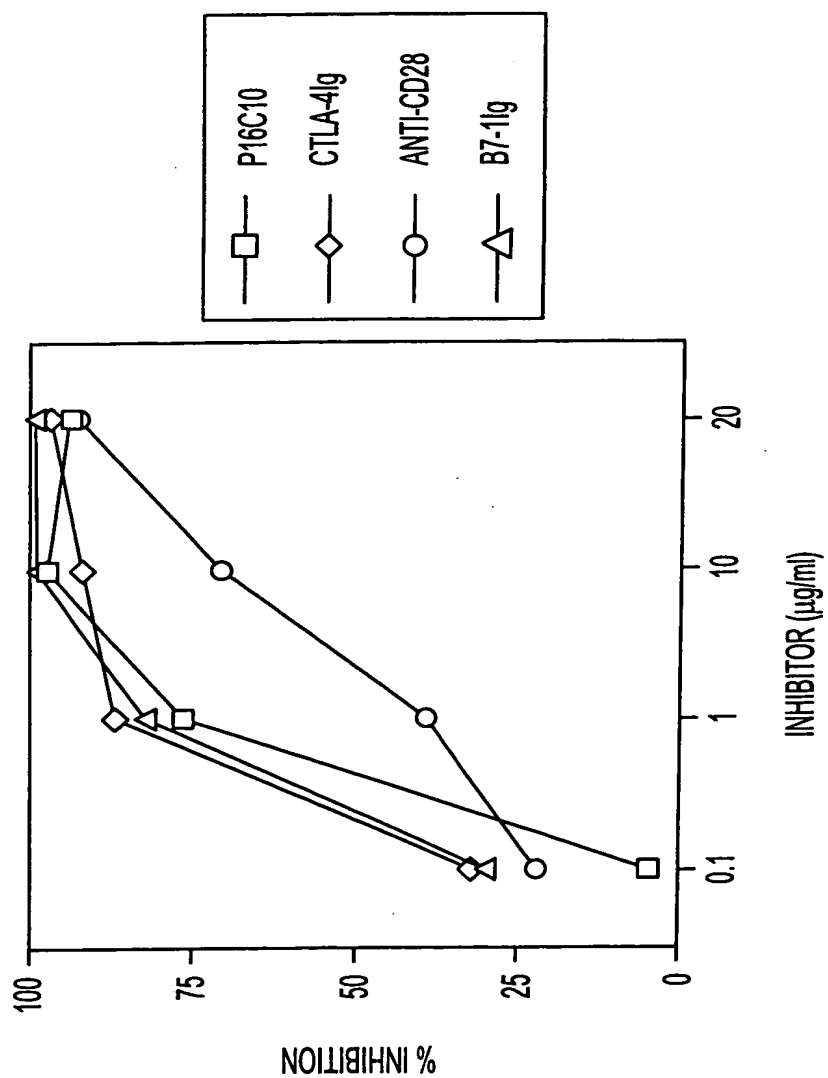


FIG. 10

IDEC-114 Does Not Block IL-2 Production Induced by Co-stimulation with Anti-CD3 and B7Ig Coated Latex Microspheres

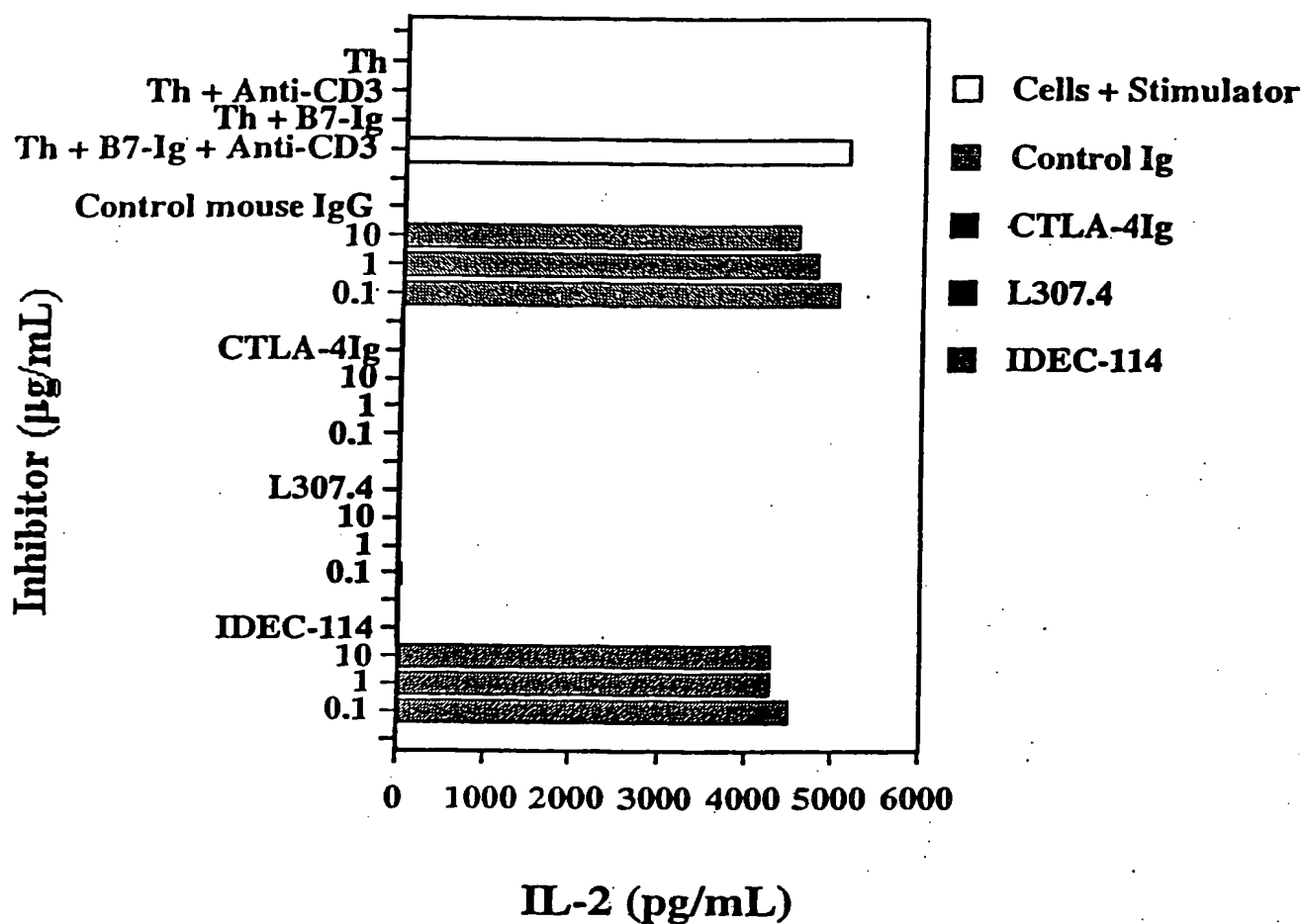


FIG. 11

IDEC-114 Does Not Block T cell Growth When Co-stimulated by Anti-CD3 and B7Ig Coated Latex Microspheres

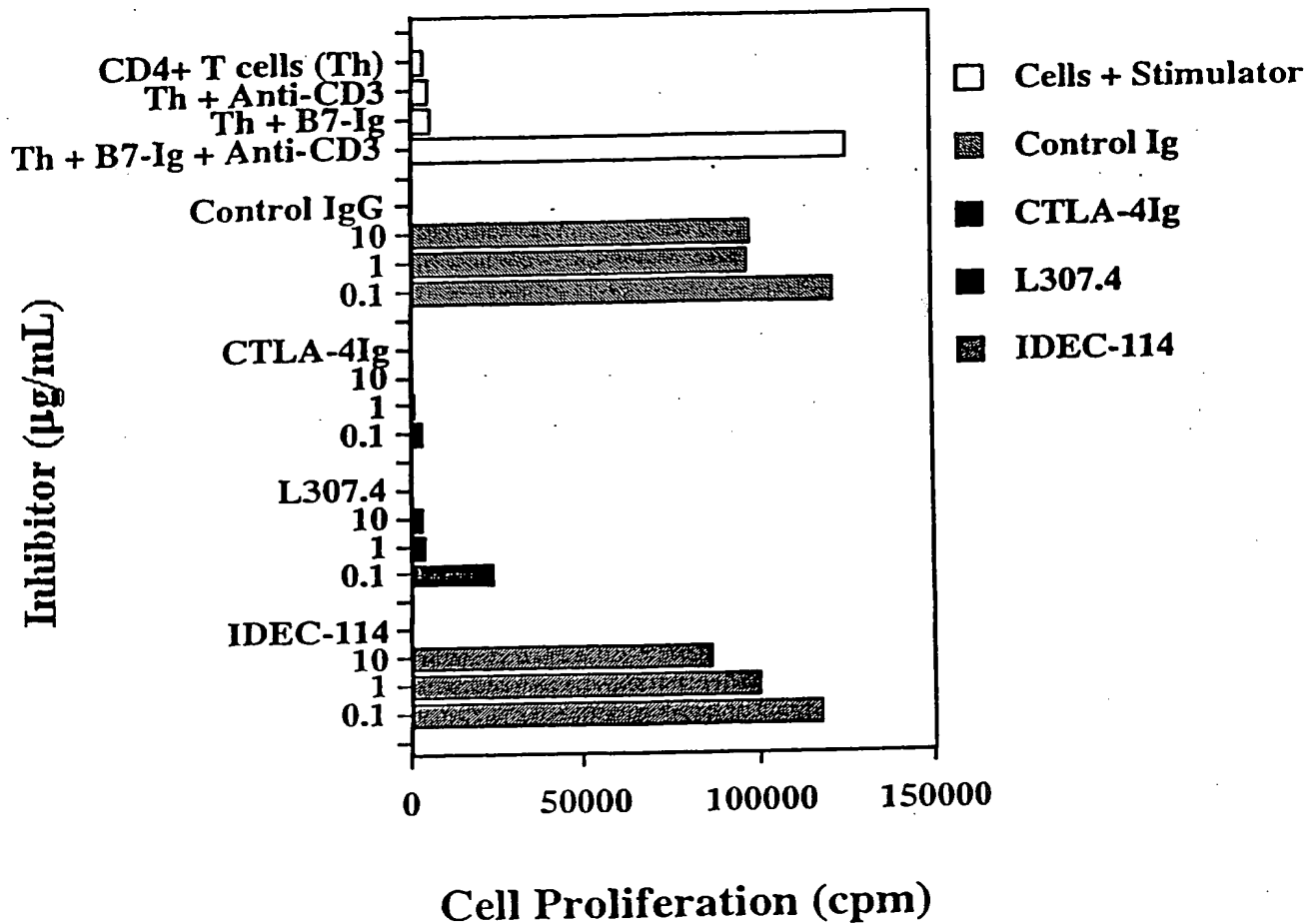


FIG. 12

Production of IL-10 by Co-stimulation with Anti-CD3:B7-Ig (1:10) Latex Microspheres is Inhibited by CTLA-4Ig, and Anti-CD80 Antibodies L307.4 and IDEC-114

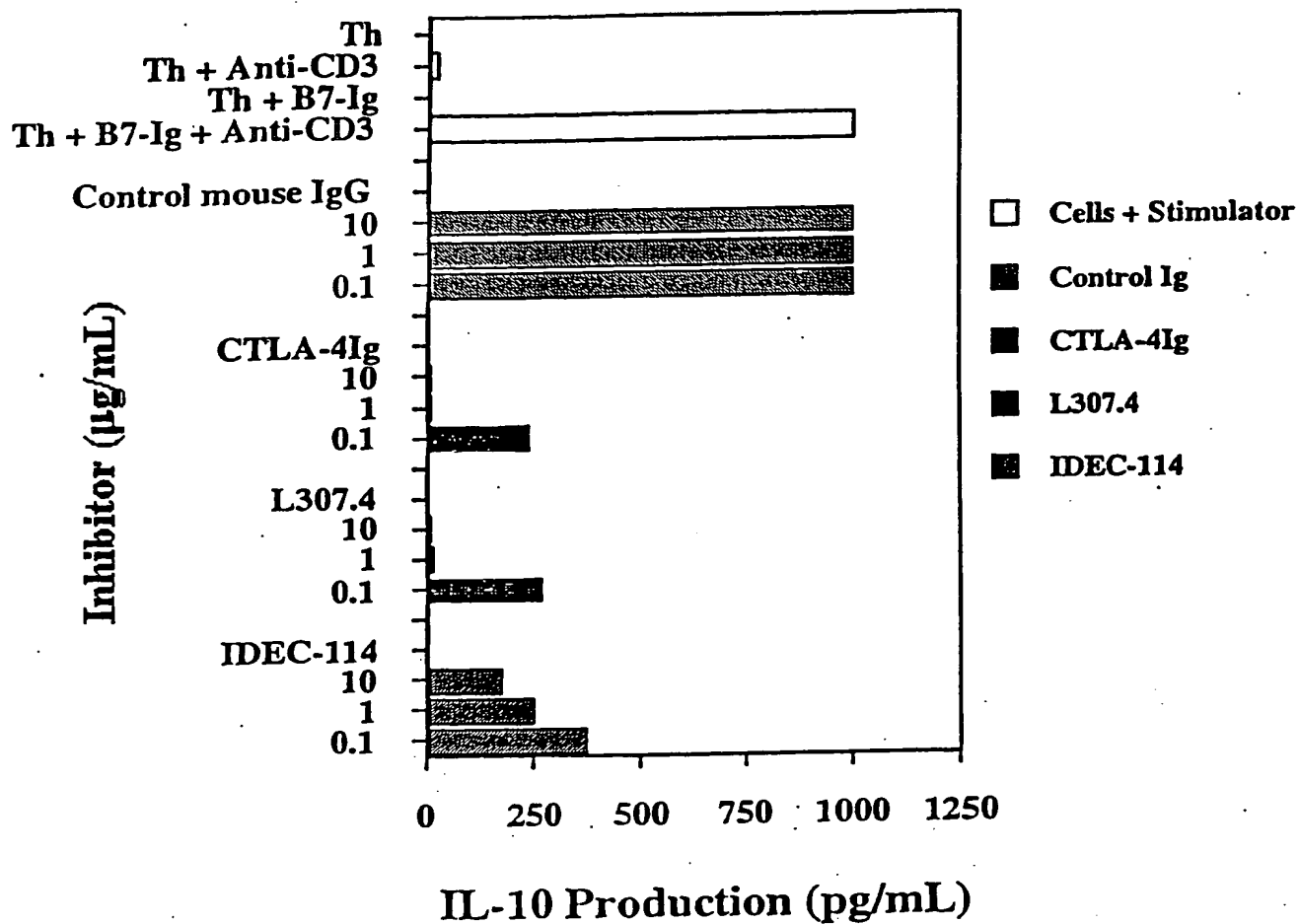


FIG. 13

**IDEC-114 Blocks IL-2 Production by Purified CD4+ T Cells
When Low Bead Densities of B7 are Used as Stimulators**

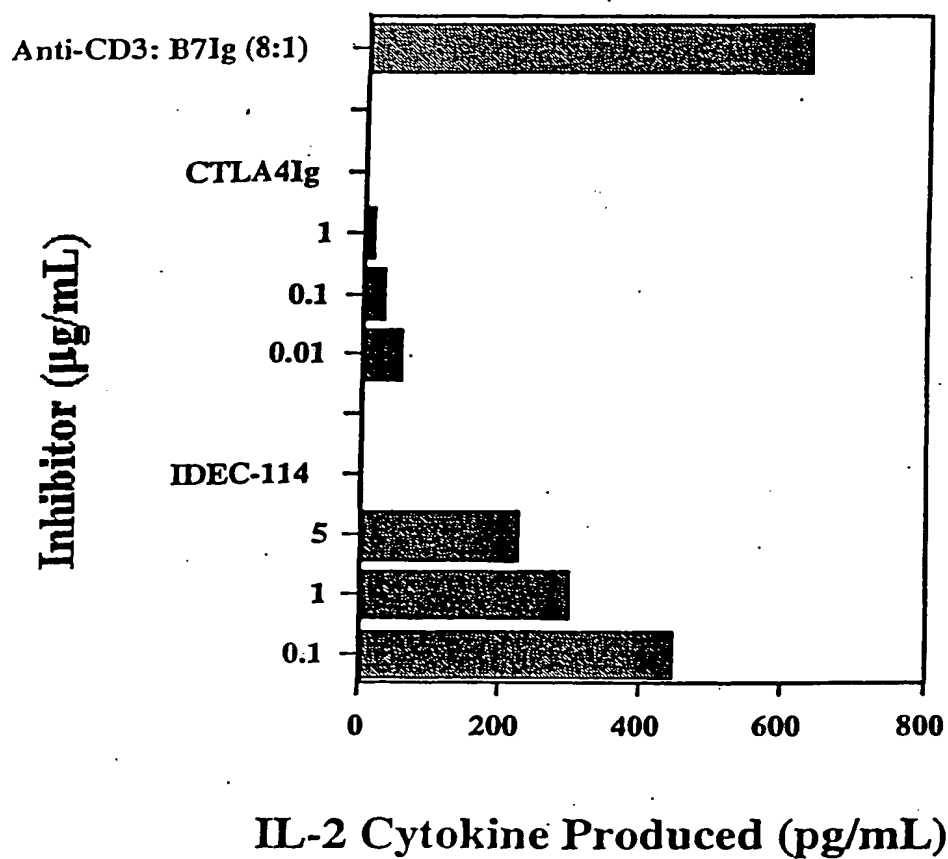


FIG. 14